

AMENDMENTS TO THE CLAIMS

1-18. (Canceled)

19. (Previously presented) An electronic apparatus, comprising:

an electrical power source; and

a heating device electrically connected to said electrical power source such that current may be transmitted through a portion thereof, said heating device having electrical resistivity of 1,500 micro-Ohm-cm or greater, flexural strength of at least about 1,500 psi, and a density of about 1.5 to 1.75 g/cc.

20. (Previously presented) The apparatus of Claim 19, wherein said heating device has a thermal conductivity of less than or equal to 10 BTU/hr-ft-.degree. F.

21. (Previously presented) The apparatus of Claim 20, wherein said heating device has an electrical resistivity of over 3,000 micro-Ohm-cm.

22. (Previously presented) The apparatus of Claim 19, wherein said heating device has an electrical resistivity of over 3,000 micro-Ohm-cm.

23. (Previously presented) The apparatus of Claim 19, wherein said heating device is a soldering iron tip.

24. (Previously presented) The apparatus of Claim 23, wherein said soldering iron tip includes first and second electrodes.

25. (Previously presented) The apparatus of Claim 19, wherein said apparatus is a soldering iron.

26. (Previously presented) The apparatus of Claim 19, wherein the heating device includes graphite.

27. (Previously presented) The apparatus of Claim 19, wherein the electrical power source includes at least one battery.

28. (Previously presented) The apparatus of Claim 19, further comprising a body constructed of a heat resistant material.

29. (Previously presented) A portable electronic device, comprising:

a body;

an electrical power storage source associated with said body, said electrical power storage source including positive and negative terminals; and

a heating element associated with said body, said heating element connected to said positive or negative terminal, wherein said heating element is constructed of a material having electrical resistivity of 1,500 micro-Ohm-cm or greater, flexural strength of at least about 1,500 psi, and a density of about 1.5 to 1.75 g/cc.

30. (Previously presented) The device of Claim 29, wherein said body is constructed of a heat resistant material.

31. (Previously presented) The device of Claim 29, wherein said electrical power storage source includes at least one battery.

32. (Previously presented) The device of Claim 29, wherein said heating element has a thermal conductivity less than or equal to 10 BTU/hr-ft-.degree. F.

33. (Previously presented) The device of Claim 29, wherein said heating element has an electrical resistivity of over 3,000 micro-Ohm-cm.

34. (Previously presented) The device of Claim 33, wherein said heating element has a thermal conductivity of less than or equal to 10 BTU/hr-ft-.degree. F.

35. (Previously presented) The device of Claim 29, wherein the heating element includes graphite.

36. (Previously presented) The device of Claim 29, wherein said device is a soldering iron.

37. (Previously presented) A device comprising electrical transmission structure and at least one heating element electrically connected to said electrical transmission structure, said heating element having an electrical resistivity of 1,500 micro-Ohm-cm or greater, flexural strength of at least about 1,500 psi, and a density of about 1.5 to 1.75 g/cc.

38. (Previously presented) The device of Claim 37, wherein said heating element has a thermal conductivity less than or equal to 10 BTU/hr-ft-.degree. F.

39. (Previously presented) The device of Claim 38, wherein said heating element has an electrical resistivity of over 3,000 micro-Ohm-cm.

40. (Previously presented) The device of Claim 37, wherein said heating element has an electrical resistivity of over 3,000 micro-Ohm-cm.

41. (Previously presented) The device of Claim 37, wherein said device is a soldering iron.

42. (Previously presented) The device of Claim 37, wherein said heating element includes graphite.

43. (Previously presented) An electronic circuit comprising an electrical power source coupled in electrical communication to at least one heating element, wherein said heating element has an electrical resistivity of 1,500 micro-Ohm-cm or greater, flexural strength of at least about 1,500 psi, and a density of about 1.5 to 1.75 g/cc.

44. (Previously presented) The electronic circuit of Claim 43, wherein said heating element has a thermal conductivity less than or equal to 10 BTU/hr-ft-.degree. F.

45. (Previously presented) The electronic circuit of Claim 44, wherein said heating element has an electrical resistivity of over 3,000 micro-Ohm-cm.

46. (Previously presented) The electronic circuit of Claim 43, wherein said heating element has an electrical resistivity of over 3,000 micro-Ohm-cm.

47. (Previously presented) The electronic circuit of Claim 43, wherein said electrical power source includes at least one battery.

48. (Previously presented) The electronic circuit of Claim 43, wherein said heating element includes graphite.

49. (New) An electronic apparatus, comprising:
an electrical power source; and
a heating device electrically connected to said electrical power source such that current may be transmitted through a portion thereof, said heating device having electrical resistivity of 1,500 micro-Ohm-cm or greater and a density of about 1.5 to 1.75 g/cc.

50. (New) The apparatus of Claim 49, wherein said heating device has an electrical resistivity of over 3,000 micro-Ohm-cm.

51. (New) The apparatus of Claim 49, wherein said heating device is a soldering iron tip.

52. (New) The apparatus of Claim 51, wherein said soldering iron tip includes first and second electrodes.

53. (New) The apparatus of Claim 49, wherein said apparatus is a soldering iron.

54. (New) The apparatus of Claim 49, wherein the heating device includes graphite.

55. (New) The apparatus of Claim 49, wherein the electrical power source includes at least one battery.

56. (New) A portable electronic device, comprising:
a body;
an electrical power storage source associated with said body, said electrical power storage source including positive and negative terminals; and

a heating element associated with said body, said heating element connected to said positive or negative terminal, wherein said heating element is constructed of a material having electrical resistivity of 1,500 micro-Ohm-cm or greater and a density of about 1.5 to 1.75 g/cc.

57. (New) The device of Claim 56, wherein said electrical power storage source includes at least one battery.

58. (New) The device of Claim 56, wherein said heating element has an electrical resistivity of over 3,000 micro-Ohm-cm.

59. (New) The device of Claim 56, wherein the heating element includes graphite.

60. (New) The device of Claim 56, wherein said device is a soldering iron.

61. (New) A device comprising electrical transmission structure and at least one heating element electrically connected to said electrical transmission structure, said heating element having an electrical resistivity of 1,500 micro-Ohm-cm or greater and a density of about 1.5 to 1.75 g/cc.

62. (New) The device of Claim 61, wherein said heating element has an electrical resistivity of over 3,000 micro-Ohm-cm.

63. (New) The device of Claim 61, wherein said device is a soldering iron.

64. (New) The device of Claim 61, wherein said heating element includes graphite.

65. (New) An electronic circuit comprising an electrical power source coupled in electrical communication to at least one heating element, wherein said heating element has an electrical resistivity of 1,500 micro-Ohm-cm or greater and a density of about 1.5 to 1.75 g/cc.

66. (New) The electronic circuit of Claim 65, wherein said heating element has an electrical resistivity of over 3,000 micro-Ohm-cm.

67. (New) The electronic circuit of Claim 65, wherein said electrical power source includes at least one battery.

68. (New) The electronic circuit of Claim 65, wherein said heating element includes graphite.

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